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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/796,450	03/09/2004	David G. Wilson	DGW-100US	2398
23122	7590	09/30/2005	EXAMINER	
RATNERPRESTIA			THOMAS, COURTNEY D	
P O BOX 980			ART UNIT	
VALLEY FORGE, PA 19482-0980			PAPER NUMBER	
			2882	

DATE MAILED: 09/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/796,450	Applicant(s) WILSON, DAVID G.	
	Examiner Courtney Thomas	Art Unit 2882	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 March 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>07/12/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION***Drawings***

1. **Figures 1, 2A, 2B, 3A, 3B, 4A and 4B** (see pp. 1-4 - Background of the Invention) should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to because a) demarcation line (420) is not visible in Fig. 4B (see spec. p. 4) and b) it is unclear how representative soft-tissue filter screen illustrated in Fig. 5, relates to the soft tissue filter screen shown in Fig. 7, since there appears to be no scale-relation between the two. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after

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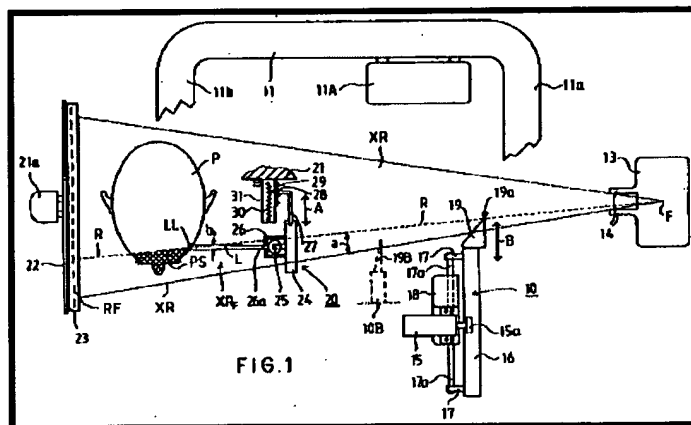
the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asikainen (U.S. Patent 5,454,023) in view of Applicant's Admitted Prior Art (AAPA).



5. **Figure 1 - Cephalometric Radiology Apparatus - U.S. Patent 5,454,023 to Asikainen**

6. As per claims 1, 13, 14, 20, 21, Asikainen discloses an apparatus (and corresponding method of use) comprising: an X-ray generator (13); an X-ray detector (23); a support structure (12-not shown above); a collimator (14); a soft tissue filter (19), wherein the soft tissue filter screen is independently adjustable relative the collimator (14); and a mounting component (10)

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supporting the soft tissue filter screen. Asikainen does not explicitly disclose an apparatus wherein the soft tissue filter screen comprises an anterior facial portion having a leading edge, wherein the leading edge is located at the most posterior position of the anterior facial portion and a submental-neck portion coupled to the anterior facial portion and having a leading edge at a position relative to the leading edge of the anterior facial portion.



Figure 4A - Applicant's Admitted Prior Art - U.S. Patent Application 10/796450 to Wilson

8. Applicant's Admitted Prior Art (hereinafter AAPA) discloses a soft tissue filter screen (400 - see pp. 3-4) having an anterior facial portion (**not numbered**) having a leading edge (410) wherein the leading edge is located at the most posterior position of the anterior facial portion and a submental neck portion (**not numbered**) coupled to the anterior facial portion and having a leading edge at a position relative to the leading edge of the anterior facial portion. AAPA teaches that such a soft tissue filter screen enables the visualization of the soft tissue of the anterior facial and submental-neck portion (and possibly the lower neck portion) congruently with hard tissue structures on the same radiograph (see p. 3).

9. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus of Asikainen, such that it incorporated a soft-tissue filter screen wherein the soft tissue filter screen comprises an anterior facial portion having a

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leading edge and a submental-neck portion coupled to the anterior facial portion. One would have been motivated to make such a modification for the purpose of implementing various soft-tissue filtering profiles when necessary as suggested by Asikainen (column 2, lines 28-30) and to also enable the visualization of the soft tissue of the anterior facial and submental-neck portion (and possibly the lower neck portion) congruently with hard tissue structures on the same radiograph, as suggested by AAPA (see p. 3).

10. **As per claims 2-6, 10, 22, 23 and 27-30**, Asikainen as modified above, discloses an apparatus wherein the soft tissue filter screen is L-shaped; is adjustable relative to the collimator (14) in the anterior/posterior and superior/inferior directions (see direction B in Fig. 1, above); is a unitary component; is beveled (see Fig. 4A, above) and adapted to enhance radiograph images of the neck contour of a patient.

11. **As per claims 7-9 and 24-26**, Asikainen as modified above, does not explicitly disclose that the anterior facial portion and the submental-neck portion of the soft tissue filter screen are modular and that the submental-neck portion is adjustable relative the anterior facial portion and the anterior facial portion and submental-neck portion are connected to one another along mated beveled edges.

12. It would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the apparatus of Asikainen such that a) the anterior facial portion and the submental-neck portion of the soft tissue filter screen are modular, b) that the submental-neck portion is adjustable relative the anterior facial portion and c) the anterior facial portion and submental-neck portion are connected to one another along mated beveled edges. One would have been motivated to make such a modification for the purpose of capturing more

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profiles by allowing distinct portions of the screen to be adjustable relative to each other, thereby granting the apparatus the ability to accommodate various patients with differing characteristics.

13. **As per claims 11 and 31**, Asikainen as modified above, does not explicitly disclose that the soft tissue filter screen is copper.

14. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus of Asikainen, such that it incorporated a soft tissue filter screen comprising copper. One would have been motivated to make such a modification for the purpose of providing a filter screen with good X-ray attenuating properties, thereby reducing radiation exposure to a patient, as is currently practiced among radiologists.

15. **As per claim 12**, Asikainen as modified above, does not explicitly disclose that the collimator comprises four plates defining an opening to define an X-ray beam; the plates being independently adjustable.

16. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus of Asikainen, such that it incorporated a collimator comprising four plates defining an opening to define an X-ray beam; the plates being independently adjustable. One would have been motivated to make such a modification for the purpose of adjusting the size of an X-ray beam for imaging purposes and restricting X-ray radiation only to an area of interest, thereby reducing the possibility of over-exposure to a patient, as is currently practiced among radiologists.

17. **As per claims 15-17, 32 and 33**, Asikainen as modified above, discloses an apparatus further comprising at least one positioning light (25) to identify an optimum position of the soft tissue filter screen (see Fig. 1, above; see also column 3).

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18. As per claims 18, 19 and 34, Asikainen as modified above, discloses an apparatus wherein the soft tissue filter screen is mounted between the collimator and X-ray source; and wherein the collimator is mounted between the soft tissue filter screen and the X-ray detector (see column 5, lines 20-24).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Courtney Thomas whose telephone number is (571) 272-2496. The examiner can normally be reached on M - F (9 am - 5 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on (571) 272 2490. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Courtney Thomas
Examiner
Art Unit 2882